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On the Aspectual Properties of English Derived Nominals*

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1. Overview

English provides several distinct mechanisms by which verbs may be nominalized, as illustrated in (1-2). The form *electing* in (1a) is sometimes termed the “verbal” gerund, while the perfectly homophonous form in (1b) is termed the “nominal” gerund. Nominal gerunds in English are distinguished from verbal gerunds syntactically, by their inability to assign objective case to an object (hence the preposition *of* in 1b), and also by the necessity of possessive marking on their logical subject (in contrast to the optional possessive marking in 1a).

- (1) a. The department(’s) electing John displeased me.
(verbal gerund)
- b. The department’s electing of John displeased me.
(nominal gerund)
- (2) a. The department’s election of John displeased me.
(active derived nominal)
- b. John’s election (by the department) displeased me.
(passive derived nominal)

In many cases English also provides a derived nominal, such as *election* in (2).¹ The choice of nominalizing suffix (e.g. *-tion*, *-ment*, *-th*) in a derived nominal is often idiosyncratic. The subject, if overt and prenominal, necessarily bears

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¹For ease of exposition, I will restrict the term “derived nominal” to non-gerundive forms.

possessive marking, and the object, if overt, is never assigned objective case directly; thus, the preposition *of* is obligatory in (2a). Derived nominals occur in both “active” (2a) and “passive” (2b) forms.

The literature on English derived and gerundive nominals includes numerous arguments that at least two types of interpretations must be distinguished: eventive readings and propositional readings (e.g. Vendler 1967, Bennett 1988, Parsons 1990). More recently, Grimshaw (1990) has argued for a distinction between “complex event nominals” and “simple event nominals.” In terms of this distinction, Grimshaw argues that all passive nominals in English belong to the class of simple event nominals.

In this paper I will provide arguments in support of a three-way distinction between propositional, simple eventive, and complex eventive readings for nominals.² Thus, I will interpret Grimshaw’s “simple” and “complex” event readings as a division within event nominals, independent of propositional nominals. I will disagree with Grimshaw in the treatment of passive nominals; I will argue that passive nominals have both complex-event and propositional, as well as simple-event, readings.

Passive nominals, on their complex-event readings, will be shown to differ from active nominals with respect to their aspectual properties: Passive nominals resist an “on-going process” reading available to active nominals. An analysis will be proposed in which (1) simple event nominals are event sortals; (2) active complex event nominals denote either the “development” or the “culmination” of an underlying event; (3) passive complex event nominals denote the culmination of an underlying event; and (4) both the development and the culmination of a given event are themselves “eventualities” (in the sense of Bach 1986).

2. Simple Event, Complex Event, and Propositional Readings

Vendler (1967) demonstrated that clauses and noun phrases denoting propositions are disallowed as the subject of the verb *occur*, as illustrated in (3a-b) (cf. also Bennett 1988).

- (3) a. *That the department elected John occurred last year.
b. *The fact that the department elected John occurred last year.
c. *The department’s electing John occurred last year.

Sentence (3c) contains a verbal (or in Vendler’s terminology, “imperfect”) gerund. Vendler argues that English verbal gerunds always denote a proposition. In (4), however, noun phrases denoting events are permissible as subjects of *occur*.

- (4) a. The department’s election of John occurred last year.

²I will not assume, however, that this typology is necessarily exhaustive.

- b. (?) The department's electing of John occurred last year.

Sentence (4a) contains an (active) derived nominal denoting an event, and (4b) contains a nominal gerund (or in Vendler's terminology, "perfect gerund"), which likewise denotes an event under Vendler's analysis.³ According to Bennett (1988), Parsons (1990), and others, the contrast between nominals denoting propositions (3) versus events (4) results from the fact that events, by their nature, "occur" or "happen," whereas propositions do not.

Bennett (1988), following Vendler, further argues that event nominals (as distinguished from propositional nominals) are "event sortals," and that they can therefore be individuated, pluralized, and quantified. This point is illustrated by the examples in (5).

- (5) a. The departmental election occurred last year.
b. The departmental elections occurred last year.
c. Several / three departmental elections occurred last year.

Yet, Grimshaw (1990) has observed that active derived nominals as in (4a), with an overt object, either resist pluralization and quantification altogether, or radically change their meaning when pluralized or quantified. This is illustrated in (6), where pluralization (6b) or quantification (6c) of the nominal results in ungrammaticality.⁴

- (6) a. The department's election of John occurred last year.
b. ?* The department's elections of John ...
c. ?* Several / three elections of John ...

If the object of the nominal is omitted, as in (5) or (7), the result is grammatical but the meaning changes markedly.

- (7) a. The department's elections occurred last year.
b. Several / three elections occurred last year.

³Example (4b) sounds mildly degraded to some speakers, perhaps because of a general preference for the derived nominal whenever it can stand in for the nominal gerund.

⁴The quantifiers *several* and *three* in (6c) require a plural form of the nominal, and may be independently excluded for this reason, as in (6b). Yet, this is unlikely to be the entire explanation, because *one* and *a single* are (arguably) quantificational, occur with a singular form of the nominal, and still yield ungrammatical expressions in (i) and (ii).

(i) ?* One election of John ...

(ii) ?* A single election of John ...

In (6a), the meaning of the nominal *election* is closely related to a particular person (*John*), and pertains to the event in which this person is elected to office. The meaning of *election* in (5) and (7), however, is necessarily quite different, and relates to the entire procedure of casting and counting up votes for the various candidates.

To account for the contrast between examples such as (5,7) and (6), Grimshaw proposes to distinguish “simple event nominals” (SENs) as in (5,7) from “complex event nominals” (CENs) as in (6). CENs are not explicitly distinguished from propositional nominals in Grimshaw’s discussion, but the fact that the derived nominals in (5a) and (6a) pass the *occur* test clearly indicates that both SENs and CENs are genuinely eventive in at least some cases, and indeed, the majority of Grimshaw’s CEN (and SEN) examples pass this test. Hence, Grimshaw’s simple/complex distinction applies (at least) internally to the class of eventive nominals.⁵ Grimshaw’s SENs correspond directly to the “event sortals” of Vendler and Bennett, while her CENs correspond neither to event sortals nor to propositions.

3. Properties of Complex Event Nominals

In addition to serving as the subject of an eventive verb such as *occur*, CENs can also express a perceptual report, as one would expect if they are genuinely eventive (cf. Higginbotham 1983).

- (8) a. Mary witnessed the department’s election of John.
b. John was the president’s son.
c. Mary witnessed the department’s election of the president’s son.

In (8a,c), the verb *witnessed* requires a perceptual report as its complement. The fact that the derived nominal in (8a,c) is necessarily interpreted as a perceptual report is demonstrated by its transparency to the substitution of identicals. Thus, the truth of (8a) and (8b) necessarily implies the truth of (8c).

In contrast, the predicate *was aware of* is compatible with a propositional complement. In (9), the nominal is opaque to the substitution of identicals; the truth of (9a) and (9b) does not guarantee the truth of (9c).

- (9) a. Mary was aware of the department’s election of John.
b. John was the president’s son.

⁵To the best of my knowledge, all English nominals that are propositional by the *occur* test pattern with CENs in disallowing pluralization and quantification of the kinds in (6b,c). Thus, Grimshaw’s simple/complex division does not immediately extend to propositional nominals.

- c. Mary was aware of the department's election of the president's son.

Notice that the form of the active derived nominal in (8a, 9a) does not differ according to its interpretation. The vast majority of active derived nominals that are compatible with a CEN interpretation are also compatible with a propositional interpretation. The propositional interpretation can be blocked extrinsically, however, through the use of an eventive verb such as *occur*, or through the use of an obligate perceptual-report verb such as *witness*.⁶

The possibility of obtaining both propositional and CEN readings for what is, at least phonologically, a single nominal, complicates linguistic analysis considerably. Indeed, Grimshaw takes a distinguishing characteristic of CENs, as opposed to SENs, to be their compatibility with the aspectual modifiers *frequent* and *constant*, but this claim is mistaken. When we permit the possibility of a propositional reading, as in (10a), the modifiers are indeed permitted, as Grimshaw observes. Yet, when we take care to ensure a genuinely eventive (i.e. non-propositional) reading of the derived nominal, through the use of the verb *occur*, it becomes clear that true CENs are incompatible with these modifiers, as illustrated in (10b).

- (10) a. The department's frequent / constant election of John surprised the dean.
- b. The department's (*frequent / *constant) election of John occurred last year.
- c. Frequent / constant departmental elections occurred last year.
- d. * A frequent / constant departmental election occurred last year.

Example (10c) suggests that a collection of events, denoted by the plural SEN *elections*, can serve as the subject of the verb *occur*, and moreover that aspectual modifiers of frequency can be applied to such a collection. Nonetheless, a single event, as denoted by the singular SEN (*departmental*) *election* in (10d), is incompatible with the modifiers *frequent* and *constant*, presumably because these modifiers imply high frequency of occurrence, and a singleton event is by

⁶Furthermore, the editors of this volume have brought to my attention the sharp contrast in temporal (in)dependence between (i) and (ii), which lends additional support to the view that the nominal in (8a) is functioning as a pure perceptual report.

- (i) # Yesterday, Mary witnessed the department's election of John last week.
- (ii) Yesterday, Mary was aware of the department's election of John last week. (But today she forgot.)

definition infrequent.⁷ Thus, compatibility with *frequent* and *constant* is characteristic of propositional nominals and plural SENs, but not CENs or singular SENs. Table 1 summarizes a number of distinguishing characteristics of the SEN, CEN, and propositional interpretations. The last row of the table (compatibility with *continues*) will be discussed in the following section.

	<u>PROPOSITIONAL</u>	<u>EVENTIVE</u>	
		<u>COMPLEX</u>	<u>SIMPLE</u>
Compatible with <i>occur</i> and <i>happen</i>	NO	YES	YES
Capable of functioning as pure perceptual report	NO	YES	YES
Compatible with pluralization and quantification	NO	NO	YES
Compatible with <i>frequent</i> and <i>constant</i>	YES	NO	SINGULAR: NO PLURAL: YES
Compatible with <i>continues</i>	NO	ACTIVE: YES PASSIVE: NO	YES

Table 1. A typology of interpretations for English derived nominals.

4. Passive Nominals

Grimshaw argues that passive nominals (as in 2b, 11b) are necessarily SENs, in part because of their purported incompatibility with the aspectual modifiers *frequent* and *constant*. As discussed above, however, the compatibility of a singular noun with *frequent* or *constant* is diagnostic of a propositional nominal, rather than a CEN. To the extent that passive nominals are incompatible with such modifiers, it simply suggests that they resist a propositional reading. On the other hand, the incompatibility of passive nominals with these modifiers is perhaps overstated, as illustrated in (11b).

⁷We should therefore expect that an aspectual modifier expressing extreme *infrequency*, such as *rare*, would be compatible with a singular SEN. This expectation is borne out in example (i).

- (i) A rare departmental election occurred last year.

- (11) a. The department's frequent election of John surprised the dean.
 b. ?(?) John's frequent election surprised the dean.
 c. * The frequent hurricane in Miami distressed the residents.
 d. The frequent hurricanes in Miami distressed the residents.

While (11b) is degraded relative to its active-nominal counterpart (11a), it is nonetheless considerably better than (11c), in which the singular SEN *hurricane* (which lacks a homophonous propositional nominal) is modified by *frequent*. As usual, the plural version of (11c) in (11d) is fully grammatical; recall (10c) above.

Moreover, as noted earlier, the nominal *election* has very different meanings in its SEN and CEN uses. The passive nominal clearly takes the CEN reading in (12b).

- (12) a. The election of John to the senate occurred last year.
 b. John's election to the senate occurred last year.
 c. * Both elections of John to the senate occurred in the 1980s.
 d. * John's elections to the senate both occurred in the 1980s.
 e. Three presidential elections occurred in the 1980s.

Furthermore, exactly as the complex-event reading becomes unavailable with pluralization of the active nominal in (12c), so the complex-event reading becomes unavailable with pluralization of the passive nominal in (12d). The CENs in (12c-d) contrast sharply with the plural SEN in (12e). Given that a passive nominal can serve as the subject of *occur* and simultaneously receive a clear complex-event reading (12b), it appears that (contrary to Grimshaw 1990) passive nominals do function as CENs.

On the other hand, there is a subtle and interesting aspectual difference between active and passive nominals that has been largely overlooked in the literature on nominals. As noted in Snyder 1990, there is a mild but consistent contrast between active and passive nominals in their ability to serve as the subject of the verb *continue*.

- (13) a. If the barbarians' destruction of the city continues for another week, little will remain.
 b. ?? If the city's destruction (by the barbarians) continues for another week, little will remain.
- (14) a. If the treatment of our guest in this manner continues, I will dismiss you from the hotel staff.

- b. ?? If our guest's treatment in this manner continues, I will dismiss you from the hotel staff.
- (15) a. If the reorganization of the filing system continues, I'll never be able to find anything.
- b. ?? If the filing system's reorganization continues, I'll never be able to find anything.
- (16) a. If the consumption of our food continues at this rate, we'll exhaust our supplies in a week.
- b. ?? If our food's consumption continues at this rate, we'll exhaust our supplies in a week.

In their relative incompatibility with the verb *continue*, passive nominals contrast not only with active CENs, but also with SENs (17a,b) and nominals denoting states (17c).

- (17) a. If the hurricane continues, we'll have to evacuate.
- b. If the departmental election continues much longer, I'll go mad.
- c. If Mary's hostility / antipathy toward Fred continues, we'll have to separate the two of them.

Thus, the explanation for the relative unacceptability of the (b) examples in (13-16) cannot be that passive nominals require a simple-event reading (cf. Grimshaw); if it were, the examples in (17a-b) would be similarly degraded. Neither can the explanation be that passive nominals necessarily denote states (e.g. the result-states of the events named by the corresponding active nominals; cf. Parsons' 1990 account of the English present perfect); if that were the explanation, (17c) would be similarly degraded. Furthermore, while *continue* requires a non-propositional subject, passive nominals are relatively acceptable on the eventive reading, at least in examples such as (11b) and (12b). Thus, the explanation cannot be that passive nominals necessarily, or even preferentially, denote propositions. In the following section I will propose that the contrast between the (a) and (b) examples in (13-16) results from the fact that the passive nominalization of an accomplishment verb denotes the *culmination* of an underlying accomplishment event.

5. An Analysis of Complex Event Nominals

A successful analysis of complex event nominals must account for at least the following facts. A CEN is eventive, rather than propositional, in that it can serve as the subject of *occur* or *happen*, and it can function as a pure perceptual

report. A CEN is incompatible with the aspectual modifiers *frequent* and *constant*, which force a propositional rather than complex-event reading when combined with a singular nominal. A CEN does not serve as a simple event sortal, as it cannot be pluralized or quantified. Finally, a passive CEN lacks (or strongly resists) the “on-going process” reading that is available to an active CEN.

In this section I provide a brief and tentative sketch of a possible analysis of CENs. As above, I will focus on nominals derived from accomplishment verbs.⁸ The key ideas of the analysis are (once again) that (1) SENs are event sortals; (2) active CENs denote the “development” or the “culmination” of an underlying event; (3) passive CENs denote the culmination of an underlying event; and (4) both the development and the culmination of a given event are themselves “eventualities,” in the sense of Bach 1986.

With respect to the Aristotle/Vendler/Dowty classification of eventualities into accomplishments, achievements, states, and processes, accomplishments are distinguished by their aspectual decomposition into a “development” period and a “culmination” (in the terminology of Parsons 1990). For example, if John built a house, then there is some protracted “development” period of house-construction during which John worked to build a house, and there is also a point at which John’s work “culminated” in a completed house. If we say that John built a house in two months, we mean that the time that elapsed from the beginning of the development until the culmination totaled two months.

For the present analysis I will crucially assume that the development and the culmination of an accomplishment are themselves eventualities, rather than merely temporal or aspectual demarcations of an atomic accomplishment-event. In particular, I will assume that the development is an eventuality of the process class, while the culmination is an eventuality of the achievement class. Hence, a development or a culmination can readily qualify as a “happening” or “occurrence.”

A process, I will assume, is an eventuality that has a starting point and a stopping point, but whose stopping point does not qualify as a culmination. A culmination involves a change of state more profound than the mere cessation of an activity. A state is like a process in its lack of a culmination, but is distinguished from a process (at least) by its potential lack of clear starting and stopping points. An achievement (such as a culmination) represents a significant change in state in a person or object, such as a change from non-existence to existence, or a change from being in a specified location to no longer being in that location.

If we take events (and other eventualities) to be individuals, then simple event nominals such as *thunderstorm* receive a natural interpretation as event sortals (i.e., as the characteristic functions of sets of events). As a result, SENs differ minimally from other sortal nouns in their semantics and thus in their compatibility with pluralization and quantification.

⁸In earlier versions of this paper, I also considered the status of nominals derived from non-accomplishment verbs. The conclusion, however, was that such nominals were neither problematic nor especially informative, and I have therefore decided to omit them from discussion.

On this analysis, CENs differ from SENs in two main respects. First, the interpretation of a CEN is related to either the development or the culmination of an “underlying” event. Second, CENs denote a *single, specific* eventuality, rather than a set of eventualities. Both of these properties are plausibly encoded in the nominalizing affix of the CEN. For example, abstracting away from syntactic movement operations, the CEN *the department’s election of John* is proposed to have the representation in (18):⁹

(18) [DP ‘s [NP -tion [VP [the department] elect [(of) John]]]]

The VP complement to the nominalizing affix (*-tion*) picks out the set of events in which the department elected John. The affix first selects the unique event under discussion that is in the set denoted by the VP, and then returns either the (unique) development or the (unique) culmination that is a constituent of the underlying event.¹⁰

By contrast, a simple event nominal such as *a departmental election* would have the structure in (19).

(19) [DP a [NP departmental election]]

Here the nominalizing affix does not take an underlying set of events as an argument, but rather serves to indicate that *election* has the argument-taking, case-assigning, and other properties associated with sortal nouns. An SEN *typically* picks out the same types of events as the verb (if any) from which it is derived, although the noun does not require full expression of an associated argument structure, and is susceptible to “semantic drift” away from the meaning of the verb. On this proposal, the tendency for CENs to require fuller expression of the associated verb’s argument structure would follow from the presence of a VP in the syntactic representation of the CEN.

The fact that CENs prohibit pluralization and quantification, I propose, follows directly from the semantics of the English nominalizing affixes, in that they yield the *unique* culmination or development eventuality included in the accomplishment event under discussion.¹¹ Uniqueness renders both pluralization and quantification semantically anomalous. The ability of CENs to serve as the subject of *occur* follows from the fact that both events and processes (unlike states) are “happenings.” Note that if the development period were analyzed as a state rather than a process, we would incorrectly predict that CENs

⁹Prior to spell-out of (18), the logical subject (*the department*) must raise to SPEC of DP, and the V *elect* must raise and adjoin to the nominal suffix *-tion*.

¹⁰I will assume that in the usual case, the nominalizing suffix contributes the semantics of definiteness, in the sense that the VP is interpreted as a definite description of an event (e.g. *that* event in which the department elected John). In some cases it might be possible, however, for the event variable of the VP to be unselectively bound by a higher quantifier; I will leave this issue to future research.

¹¹A possible objection to this proposal is that it requires the many phonologically distinct nominalizing suffixes of English that occur in CENs all accidentally to share a somewhat arbitrary semantic property. A solution might be to view English as having a single, abstract CEN affix with a high degree of lexically conditioned allomorphy.

denoting developments are unable to serve as the subject of *occur*, but in fact (20a) is grammatical, and contrasts sharply with the state nominals in (20b).

- (20) a. The construction of the house occurred over a period of two months.
- b. * Mary's hostility / antipathy towards Fred occurred over a period of two months.

The fact that CENs, as noted above, are capable of functioning as pure perceptual reports, also follows directly from the fact that they denote events or processes, rather than propositions.

The incompatibility of CENs with the aspectual modifiers *frequent* and *constant* again follows from the fact that they denote only a *single* eventuality. As discussed earlier, there is no way for a single, isolated event or process to qualify as frequent or constant. When modified by *frequent* or *constant*, therefore, a nominal must either be propositional, or be a *plural* SEN.

When active CENs serve as the subject of *continue*, as in the (a) cases of (13-16), they are forced to denote the development portion, rather than the culmination, of the corresponding accomplishment. This is the use that best supports the conception of CENs as "process nominals" (cf. Grimshaw 1990). To serve as the subject of *continue*, a nominal must denote an eventuality with temporal extension. A process, a state, or the development portion of an accomplishment can satisfy this requirement, but an achievement (such as a culmination) cannot, because an achievement (in its strict sense) occurs at a *point* in time rather than over a proper interval of time.

The degraded status of the passive nominals in the (b) cases of (13-16) can be explained, on the present approach, if passive CENs denote the *culmination*, rather than the development, of the associated accomplishment. Such an approach leads immediately to a testable prediction. If the passive CEN in fact denotes an achievement, and therefore lacks any protracted temporal duration, it should also resist modification by a temporal *for*-phrase. This prediction is supported by the ungrammaticality of (21b), which contrasts clearly with its active counterpart in (21a).

- (21) a. (?) John's destruction of the forest for two months occurred last summer.
- b. *? The forest's destruction for two months occurred last summer.

In principle, one might regard this preference for a culmination reading simply as the lexically specified property of a phonetically null passive morpheme; Pesetsky (1990) has argued that English passive-in-nominal involves such a morpheme. Yet, the resulting account would be both stipulative and difficult to falsify. Instead, I would like to adapt a suggestion made in passing by Smith (1991:48), to the effect that on-going process interpretations of English accomplishment verbs are obtained through incorporation of the direct object

into the verb.¹² For example, in (22a) the verb has its usual accomplishment interpretation, and no incorporation is required.

- (22) a. John ate the cake in five minutes.
 b. John ate cake for five minutes.

In (22b), however, the verb acts as a process verb (as required by the aspectual modifier *for five minutes*), and here Smith's proposal requires (covert) incorporation of *cake* into the verb.¹³

Smith's suggestion fits neatly with my own, independent proposal (Snyder 1995:53) that "[t]wo syntactic heads can be interpreted as jointly characterizing the event-type of a single event-argument, if and only if those heads form a single 'word' (X⁰ category) at the point of semantic interpretation." In (22b), according to this constraint, the head N of the direct object can convert the accomplishment verb into a process verb only through (overt or covert) incorporation into V. While a variety of technical details remain to be elucidated, this incorporation proposal yields a straightforward explanation for the unavailability of an on-going process reading in passive CENs. Namely, raising of the direct object (e.g. *our food* in 16b) up to the possessive-marked position effectively precludes covert noun-incorporation of any portion of the object NP into *consume* / *consumption*, at least within the incorporation framework of Baker 1988, and therefore precludes the on-going process reading in (16b).

With active CENs (as in 16a), covert incorporation yields something along the lines of (23):

- (23) $[_{DP} \text{the } [_{NP} [_{N} [[[[food]-[our]]-[of]]-consum(e)]-tion]$
 $[_{VP} V_t [_{PP} P_t [_{DP} D_t [_{NP} N_i]]]$

While the presumed necessity of incorporating multiple heads in (23) is potentially troubling, the compound obtained covertly in (23) is otherwise syntactically comparable to the well-formed English compound *food consumption*. Given that the proposed requirement of covert incorporation is therefore satisfiable within the syntactic constraints of Baker's (1988) system, (16a) is correctly expected to be grammatical.

One immediate prediction is that simple suppression of the external argument, without raising of the object to the possessive-marked, pre-nominal

¹²I am grateful to the editors of this volume for comments leading me to consider the possibility of such a connection between morphological compounding or incorporation and the aspectual properties of nominals.

¹³Smith limits her brief discussion of this idea to verbs with a bare plural or bare mass noun as direct object (e.g. *write books*, *eat cake*), and does not clearly indicate whether incorporation, in her conception, could involve anything more than the head N of a direct object. For present purposes I will assume head-to-head movement of the N (and any intervening heads) into the V, and will further assume that incorporation in English is permitted to strand material in SPEC positions. (See Baker 1988 for discussion of the latter property as point of cross-linguistic variation.)

position, should not interfere with the on-going process reading of a CEN. This prediction is correct, as illustrated in (24).

- (24) a. If the barbarians' destruction of the city continues for another week, little will remain.
- b. ?? If the city's destruction (by the barbarians) continues for another week, little will remain.
- c. If destruction of the city (by the barbarians) continues for another week, little will remain.

Example (24c) has suppression of the external argument, with optional expression in a *by*-phrase, but the logical object remains in post-nominal position, where covert incorporation is possible. As predicted, the nominal phrase in (24c) is compatible with an on-going process reading, as in (24a) (=13a) and in contrast to (24b) (=13b).

Furthermore, given that nothing in the foregoing discussion distinguishes between CENs and VPs, we are led to the dramatic prediction that the effects observed in (13-16) will likewise be found with verbal passives. Remarkably, this prediction appears to be correct, as illustrated in (25-27) (where a non-iterative, "continuous" reading is assumed throughout).

- (25) a. John painted the house for an entire hour.
- b. ?? The house was painted (by John) for an entire hour.
- (26) a. John consumed our food for an entire hour.
- b. ?? Our food was consumed (by John) for an entire hour.
- (27) a. The secretary re-organized the filing system for an entire hour.
- b. ?? The filing system was re-organized by the secretary for an entire hour.

Note that all of these examples require aspectual "coercion" (cf. Smith 1991), in the sense that definite objects are more typically associated with an accomplishment reading of the verb (cf. 22a). The key observation, however, is that even when such coercion readily applies in the active (a) examples, it is blocked in the corresponding passive examples, precisely as predicted by the incorporation account.^{14,15}

¹⁴With the examples in (25-27), it is especially important to exclude the irrelevant "iterative" interpretation of the verb, because this interpretation is relatively salient. Indeed, the perception that the (b) examples in (13-16) and (25-27) are not *completely* ungrammatical (*) may be due to the difficulty in fully excluding irrelevant (e.g. iterative, habitual) readings.

A final prediction, which I will leave as a topic for future research, is based on the proposal in (Snyder 1995) that cross-linguistic variation in the availability of certain “complex predicates,” such as verb-particle constructions, is the result of a morphological parameter governing the availability of productive root compounding. The positive setting of the root compounding parameter is proposed to be necessary for complex predicates in which two syntactically independent heads jointly characterize the event-type of the VP. Unless the language permits productive root compounding, the heads in question cannot combine to form a complex word, as required by the proposed interpretive constraint mentioned above. The same parametric setting is also plausibly a prerequisite for the instance of covert incorporation proposed in this section, because the direct object should be permitted to alter the event-type of the verb only through incorporation.

Thus, more generally, properties of the direct object that affect the aspectual interpretation of transitive verbs in English are (tentatively) predicted not to do so in a language that lacks any productive process of root compounding for complex word formation. This prediction appears to be correct at least for the Slavic languages, which do not exhibit productive root compounding, and whose lack of verb-object aspectual interactions has been discussed in detail by Smith (1991), among others. Indeed, Slabakova (1997) has proposed (for independent reasons) that the English aspectual system of verb-object interactions is parametrically related to the inventory of complex argument structures in English, and she has succeeded in obtaining additional support for this view through a psycholinguistic investigation of the second-language acquisition of English by native speakers of Slavic languages.

6. Conclusions

To summarize, I have proposed that a three-way distinction exists between propositional, complex-event, and simple-event readings of English derived nominals, and that nominals (if considered simply as phonological strings) are often compatible with all three readings. Nonetheless, extrinsic factors, such as choice of sentential predicate, can sometimes force a particular interpretation. Notably, CENs are distinguished from propositions in that the former can serve as the subject of *occur*; can function as pure perceptual reports, and (*pace* Grimshaw) are incompatible with the aspectual modifiers *frequent* and *constant*. CENs are distinguished from SENs in that CENs are incompatible with pluralization and quantification. Passive nominals clearly have complex-event readings (*pace* Grimshaw), but do differ from active CENs in their lack of an “on-going process” interpretation.

An analysis has been proposed in which SENs are event sortals with essentially the same semantics as other sortal nouns. CENs have a more complex structure, in which the nominalizing affix takes as its argument a VP denoting a set of events. The nominal affix combines with its argument to

¹⁵I have chosen not to present the verbal counterparts to (13-14) in (25-27), because the verbs in the resulting examples are (at least to my ear) difficult to coerce into a non-iterative, development reading, even in an active sentence.

specify a single event (the one under discussion) from the set denoted by the VP, and (at least with events of the accomplishment class) to return as its value either the development (a process) or the culmination (an achievement) of the event. Passive CENs can denote only the culmination. The resistance of passive CENs to an on-going process reading (i.e. a development reading) has been argued to follow from properties of the syntax-semantics interface: The on-going process reading requires covert incorporation of the logical object into the nominalized verb. Such incorporation is syntactically blocked in passive nominals, where the logical object has raised into the prenominal possessor position.

References

- Bach, Emmon (1986). The algebra of events. *Linguistics & Philosophy* 9, 5-16.
- Baker, Mark (1988). *Incorporation: A Theory of Grammatical Function Changing*. Chicago, IL: University of Chicago Press.
- Bennett, Jonathan (1988). *Events and Their Names*. Indianapolis: Hackett Press.
- Grimshaw, Jane (1990). *Argument Structure*. Cambridge, MA: MIT Press.
- Higginbotham, James (1983). The logic of perceptual reports: An extensional alternative to situation semantics. *Journal of Philosophy* 80, 100-127.
- Parsons, Terrence (1990). *Events in the Semantics of English*. Cambridge, MA: MIT Press.
- Pesetsky, David (1990). Experiencer Predicates and Universal Alignment Principles. Ms., MIT.
- Slabakova, Roumyana (1997). L2 acquisition of the null telic morpheme - A psycholinguistic investigation. In Elizabeth Hughes, Mary Hughes, & Annabel Greenhill (eds.) *Proceedings of the 21st Annual Boston University Conference on Language Development*. Somerville, MA: Cascadilla Press.
- Smith, Carlotta (1991). *The Parameter of Aspect*. Dordrecht: Kluwer Academic Publishers.
- Snyder, William (1990). The syntactic status of passive nominals. Ms., MIT.
- Snyder, William (1995). *Language Acquisition and Language Variation: The Role of Morphology*. Unpublished Ph.D. dissertation, MIT. Distributed by MITWPL.
- Vendler, Zeno (1967). *Linguistics in Philosophy*. Ithaca, NY: Cornell University Press.

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